



**Columbia Center  
on Sustainable Investment**  
A JOINT CENTER OF COLUMBIA LAW SCHOOL  
AND THE EARTH INSTITUTE, COLUMBIA UNIVERSITY



**SUSTAINABLE DEVELOPMENT  
SOLUTIONS NETWORK**  
A GLOBAL INITIATIVE FOR THE UNITED NATIONS



Empowered lives.  
Resilient nations.

With the support of:



**giz** Deutsche Gesellschaft  
für Internationale  
Zusammenarbeit (GIZ) GmbH

COMMITTED TO  
IMPROVING THE STATE  
OF THE WORLD

# Mapping Mining to the Sustainable Development Goals: A Preliminary Atlas

Consultation Draft

January 2016



## FOREWORD

The Sustainable Development Goals (SDGs) represent the world's post-2015 agenda for equitable, socially inclusive and environmentally sustainable economic development. It is our shared belief that the mining industry has an unprecedented opportunity to mobilize significant human, physical, technological and financial resources to advance the SDGs.

Mining is a global industry and is often located in remote and less-developed areas including many indigenous lands and territories. When managed appropriately, it can create jobs, spur innovation and bring investment and infrastructure at a game-changing scale over long time horizons. If managed poorly, mining can also lead to environmental degradation, displaced populations and increased conflict, among other challenges. These attributes make the industry a major potential contributor to the SDGs. At the same time, if the mining industry does not participate or if individual companies engage in activities that contradict the goals, their achievement will be hindered.

By mapping the linkages between mining and the SDGs, the aim of this Atlas is to encourage mining companies of all sizes to incorporate relevant SDGs into their business and operations, validate their current efforts and spark new ideas. Success will also require substantial and on-going partnership between governments, the private sector, communities and civil society. We hope the Atlas spurs action that will leverage the transformative power of collaboration and partnership between the mining industry and other stakeholders. Our intention is that it will be useful for:

- National governments across all relevant ministries - mining, development, finance, environment, infrastructure and others - as a catalyst to further align mining policies with national development plans and to engage more systematically with industry and local governments to leverage investment for sustainable development.
- Local governments, communities, development agencies and civil society organizations to support programmes and efforts to help unlock the mining sector's potential to contribute to a sustainable future and as a stimulus for increased inclusive dialogue and cooperation.
- Existing and future multi-stakeholder dialogue forums at the mine site level and the country level as a foundation to integrate the role of mining into the broader discussion of sustainable development and national plans to achieve the SDGs.

The Atlas is intended as an introduction to the many linkages between mining and the SDGs and complements other resources on the role of mining and the private sector in sustainable development. Many of these resources were reviewed during the development of the Atlas and are listed at the end of each chapter. The United Nation's (UN) SDG Indicators framework will be finalized in early 2016, offering opportunity to further explore how the mining sector can align its actions and reporting.

We are releasing the Atlas as a consultation draft. While extensive initial consultations have been undertaken to develop the draft, we realize that the document covers a wide range of topics and will benefit from further review and input. We therefore welcome comments and suggestions for how to strengthen the Atlas during the consultation process from January – April 2016. During this period, we will also organize a number of multi-stakeholder consultation sessions to promote dialogue and garner further inputs for the next draft.

Finally, we would like to thank all of the experts and institutions who shared their knowledge and the reviewers who provided their expertise and feedback. The core team and the reviewers are noted in the Acknowledgements section.

We look forward to everyone's input and comment!

**Casper Sonesson**  
Policy Advisor, Extractive Industries  
Bureau for Policy and Programme  
Support  
United Nations Development  
Programme

**Gillian Davidson**  
Head of Mining and Metals  
Industries  
World Economic Forum

**Lisa Sachs**  
Director  
Columbia Center on  
Sustainable Investment

## EXECUTIVE SUMMARY

In September 2015, the 193 United Nations (UN) member states adopted “Transforming Our World: The 2030 Agenda For Sustainable Development” which includes a set of Sustainable Development Goals (SDGs) for 2015-2030. The agenda provides a successor framework for the Millennium Declaration and the Millennium Development Goals (MDGs) that were agreed upon 15 years ago for 2000-2015. The SDGs represent the world’s comprehensive post-2015 agenda for equitable, socially inclusive and environmentally sustainable economic development. Meeting the SDGs by 2030 will require unprecedented cooperation and collaboration among governments, non-governmental organizations, development partners, the private sector and communities. Achieving the SDGs will require all sectors and stakeholders to incorporate the SDGs into their own practices and operations.

This draft Atlas maps the relationship between mining and the SDGs by using examples of current work happening in the industry and existing knowledge and resources in sustainable development. It presents a broad overview of opportunities and challenges to demonstrate the actual and potential contributions of the mining sector – from exploration through production and eventually mine closure – to the achievement of the SDGs. Mining companies, their staff, management and boards are the primary audience of the Atlas. It is also intended to advance the conversation about how mining companies working both individually and collaboratively with governments, communities, civil society and other partners can achieve the SDGs.

The Atlas has a chapter for each of the SDGs focusing on the contribution the mining industry can make to that goal and identifying opportunities for how mining companies can collaborate with other stakeholders and leverage resources to address the SDGs. Each chapter also includes case studies on which to draw in building innovative, systematic and sustained collaborative efforts.

The Atlas is based on desktop research and interviews with over 60 global experts from industry, civil society, governments, academia, international organizations and financial institutions conducted between June and August 2015. Companies will see initiatives they are already implementing or participating in, some may find new ideas to support implementation and others will discover new linkages between their existing work and the SDGs. Civil society and communities may find ideas that support new partnerships or inform useful policy reforms. National and local governments may see opportunities to link policies, regulatory activity and funding to the SDGs. The Atlas aims to facilitate three outcomes:

- *increased understanding* of how the SDGs and mining relate to one another
- *awareness-raising* of opportunities and challenges that the SDGs pose for the mining industry and its stakeholders and how they might address them
- *multi-stakeholder dialogue and collaboration* towards the achievement of the SDGs

Some preliminary conclusions that we hope to discuss further during the draft consultation process are:

- ***The mining industry has the opportunity and potential to positively contribute to all 17 of the SDGs.***

The mining industry can impact positively and negatively across the SDGs. In recent decades, the industry has made significant advances in improving how companies manage their environmental and social impacts, protect the health of their workers, achieve energy efficiencies, respect and support human rights, provide opportunities for decent employment and foster economic development. Historically, however, mining has contributed to many of the challenges that the SDGs are trying to address –

environmental degradation, displacement of populations, worsening economic and social inequality, armed conflicts, gender-based violence, tax evasion and corruption, and increased risk for many health problems. Given the negative and positive impacts of mining combined with the industry's capability to mobilize human, physical, technological and financial resources, the Atlas demonstrates the role mining companies can play in contributing to all 17 of the SDGs.

- ***The scope and nature of mining activities create opportunities to leverage some goals in particular.***

While opportunities to positively contribute can be found across all of the goals, experts interviewed suggested that due to the nature of mining, the industry can contribute more directly to the following eight SDGs:

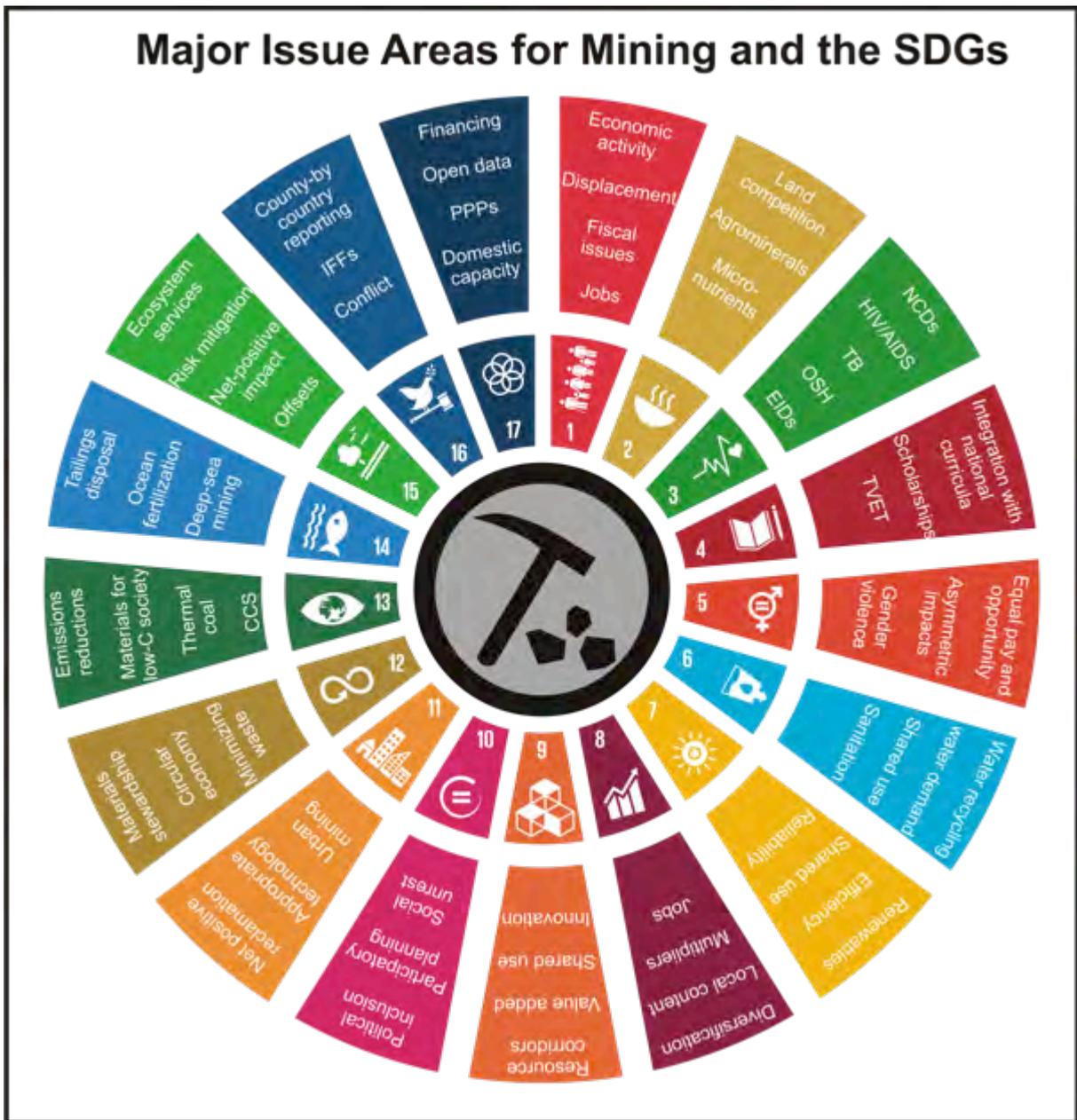
- **SDG 1 – End Poverty:** Mining generates significant revenues through taxes, royalties and dividends for governments to invest in economic and social development.
- **SDG 6 – Clean Water and Sanitation** and **SDG15 – Life on Land:** Mine development requires access to land and water presenting significant and broad landscape impacts that must be responsibly managed.
- **SDG 7 - Energy Access and Sustainability** and **SDG13 – Climate Action:** Mining activities are energy and emissions intensive in both the production and downstream uses of its products.
- **SDG8 – Decent Work and Economic Growth:** Mining can change the lives of local communities, offering opportunities for jobs and training, and also contributes to economic and social inequities if not appropriately managed.
- **SDG9 - Infrastructure, Innovation, and Industrialization:** Mining can help drive economic development and diversification through direct and indirect economic benefits, the development of new technologies and by spurring the construction of new infrastructure for transport, communications, water and energy.
- **SDG16 – Peace, Justice and Strong Institutions:** Mining can contribute to peaceful societies by avoiding and remedying company-community conflict, respecting human rights and the rights of indigenous peoples, and by supporting the representative decision-making of citizens and communities in extractives development.

- ***Building company-specific plans requires further work.***

The Atlas presents a number of ideas, options and case studies demonstrating how companies can contribute to the SDGs. Further work is required to adapt these concepts to individual businesses and specific programmes and to develop the metrics and indicators for measuring performance. The specific actions and opportunities for a particular company will depend on the local social, political, and economic context, the mineral resource, the phase of mining activities (exploration, development, extraction or closure), and the input received from local communities and other stakeholders through formal dialogue and engagement.

- ***Achieving sustainable development is challenging and the mining industry must ramp up its engagement, partnership, and dialogue with other industry sectors, government, civil society and local communities.***

To realize the full potential for contributing to the achievement of the goals, mining companies must continue to work to integrate changes into their core business and, along with the mining industry as a whole, bolster collaboration and partnership with government, civil society, communities and other stakeholders.



**Figure 1: Major issue areas for mining and the SDGs.** Abbreviations (in order): NCDs = non-communicable diseases; TB = tuberculosis; OSH = occupational health and safety; EIDs = emerging infectious diseases; TVET = technical, vocational, and educational training; CCS = carbon capture and storage; IFFs = illicit financial flows; PPPs = public-private partnerships. SDG icons adapted from <http://www.globalgoals.org/>.

This document is open for public consultation until April 8, 2016.

Comments should be submitted via the online form at:

<http://unsdsn.org/blog/news/2016/01/13/mining>.



---

COMMITTED TO  
IMPROVING THE STATE  
OF THE WORLD

---

The World Economic Forum, committed to improving the state of the world, is the International Organization for Public-Private Cooperation.

The Forum engages the foremost political, business and other leaders of society to shape global, regional and industry agendas.

---

World Economic Forum  
91–93 route de la Capite  
CH-1223 Cologny/Geneva  
Switzerland

Tel.: +41 (0) 22 869 1212  
Fax: +41 (0) 22 786 2744

[contact@weforum.org](mailto:contact@weforum.org)  
[www.weforum.org](http://www.weforum.org)